APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/487,401	01/19/2000	John R. Shedden	ST9-99-033	3119

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David N Koffsky Esq
Ohlandt Greeley Ruggiero & Perle
One Landmark Square Suite 903
Stamford, CT 06901

EXAMINER
FLEURANTIN, JEAN B

ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		09/487,401	SHEDDEN, JOHN R.
		Examiner	Art Unit
		Jean B Fleurantin	2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _RCE, 27 May 2003_ .

2a)☐ This action is **FINAL.** 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-18_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-18_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application (PTO-152)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6)☐ Other:

DETAILED ACTION

1.   Claims 1-18 are remain pending for examination.

Continued Examination Under 37 CFR 1.114

2.   The Request for Continued Examination has been fully considered and entered,

claims 1-18 are discussed in the following rejection.

Claim Rejections - 35 USC § 112

3.   Claims 1, 7 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being

incomplete for omitting essential elements, in limitations: (a) and (b), such omission

amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements

are: a primary log, and a secondary log.

Claim Rejections - 35 U.S.C. § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
>
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
>
> the prior art are such that the subject matter as a whole would have been obvious at the time the
>
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
>
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ledain et al. (US Patent No. 5,832,515) ("Ledain").

As per claims 1, 7 and 13, Ledain teaches a method for enabling improved access

to data stored in a log of a computer memory system, said computer memory system

having multiple copies of said log comprising a primary log and a secondary log, each

log storing data transactions with a database system stored on said computer memory

system (see col. 22, lines 41-51) as claimed, the method comprises the steps of

responding to a process request to read a log, by determining a parameter indicative of

demand for access to read one of said copies of said log (thus, when a request is received

to read a data block from a main filesystem whose entry points have been stolen, the log

device pseudo device driver 61 is required to determine whether the requested data block

id currently stored on the log device disks 52; which is readable as responding to a

process request to read a log, by determining a parameter indicative of demand for access

to read one of said copies of said log)(see col. 21, lines 35-39). Further, in column 30,

lines 63-67, Ledain teaches a substantial majority of read data requests actually satisfied

from the log device through the read log stream routines 130 will occur on log disks 124,

126 separate from the log disk 122 that maintains the then current first free data segment

of the log. But, Ledan does not explicitly indicate assigning the process to another of

said copies of the log if said parameter has reached a threshold value. However, Ledain

explicitly indicates the relocations information within the user data segment trailer is

examined to determine whether any particular log block has been relocated through

cleaning in excess of a threshold number of relocations, the threshold number may be set

to an adaptive control defined value; which is readable as process to another of said

copies of the log if said parameter has reached a threshold value, (see col. 30, lines 19-

20). Further, in column 29, lines 57-59, Ledain teaches once a log disk has reached the

filled segment threshold, the head of the logical log wraps to the next log disk in

sequence. Thus, it would have been obvious to a person of ordinary skill in the art at the

time of the invention was made to modify the teachings of Ledain with assigning the

process to another of said copies of the log if said parameter has reached a threshold

value. This modification would allow the teachings of Ledain to improve the accuracy

and the reliability of the active log read I/O balancing for log duplexing, and provide

efficient storage and retrieval of data with respect to an operating system executing on a

computer system to the data storage system, (see col. 5, lines 38-40).

As per claims 2, 8 and 14, Ledain teaches a method as claimed, wherein said one

of said copies of the log is the primary log (thus, the log device superblock manager 70 is

responsible for aternate copies of the superblock to be written to the log header block, to

provide each superblock copy with a sequential or versioned serial number when a

complete instance of the superblock is written out to the log header and to mark each

superblock copy as being valid and complete as written to the log header at the

conclusion of the written of each superblock copy; which.is as said copies of the log is

the primary log)(see col. 22, lines 41-51).

As per claims 3, 9 and 15, Ledain teaches a method as claimed, wherein said

parameter is a count of the processes assigned to the primary log (thus, once a log disk

has reached the filled segment threshold, the head of the logical log wraps to the next log

disk in sequence, which is readable as wherein said parameter is a count of the processes

assigned to the primary log)(see col. 29, lines 57-59).

As per claims 4, 10 and 16, in addition to the discussion in claim 1, Ledain

teaches the step of b) distributes new process assignments to both the primary log and

secondary log in an attempt to balance work of the respective logs (thus, file data reads

must continually evaluate the log itself to determine whether more current data resides in

the log or the main portion of the filesystem; which is readable as distributes new process

assignments to both the primary log and secondary log in an attempt to balance work of

the respective logs)(see col. 4, lines 12-15). Further, in columns 17-18, lines 65-6,

Ledain teaches the balance of the current data segment may be filled with new data

blocks written through the data interface 66 or as a result of cleaning the new log tail data

segment, where data blocks are actively being directed through the data interface 66 for

storage on the log device, the compacted data blocks obtained from the prior log tail data

segment may be mixed in order of receipt by the segment I/O routine 78 into the current

segment buffer maintained by the segment I/O routines 78.

As per claims 5, 11 and 17, in addition to the discussion in claim 1, Ledain further

teaches b) alternates new process assignments to the primary log and the secondary log

in an attempt to balance work of the respective logs (thus, the balance of the current data

segment may be filled with new data blocks written through the data interface 66 or as a

result of cleaning the new log tail data segment, where data blocks are actively being

directed through the data interface 66 for storage on the log device, the compacted data

blocks obtained from the prior log tail data segment may be mixed in order of receipt by

the segment I/O routine 78 into the current segment buffer maintained by the segment

I/O routines 78; which is readable as alternates new process assignments to the primary

log and the secondary log in an attempt to balance work of the respective logs)(see cols.

17-18, lines 65-6).

As per claims 6, 12 and 18, Ledain teaches a method as claimed, wherein said

parameter is a count of requests that have been queued to the primary log (thus, once a

log disk has reached the filled segment threshold, the head of the logical log wraps to the

next log disk in sequence; said parameter is a count of requests that have been queued to

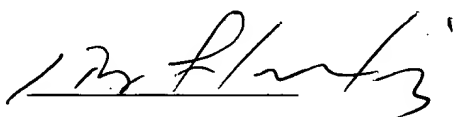the primary log)(see col. 29, lines 57-59).

5.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Ledain et al. US Pat. No. 6,021,408, relates to operation of the log

device to dynamically balance filesystem I/O transactions. Ofek et al. US Pat. No.

6,052,797, relates to maintaining a copy or mirror of data stored at a location remote from

the main or primary data storage device.

Conclusion

6.   Any inquiry concerning this communication from examiner should be directed to

Jean Bolte Fleurantin at (703) 308-6718. The examiner can normally be reached on

Monday through Friday from 7:30 A.M. to 6:00 P.M.

If any attempt to reach the examiner by telephone is unsuccessful, the examiner's

supervisor, Mrs. KIM VU can be reached at **(703) 305-8449**. The FAX phone numbers

for the Group 2100 Customer Service Center are: *After Final* **(703) 746-7238**, *Official*

(703) 746-7239, and *Non-Official (703) 746-7240*. NOTE: Documents transmitted by

facsimile will be entered as official documents on the file wrapper unless clearly marked

"DRAFT".

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Group 2100 Customer Service Center receptionist

whose telephone numbers are **(703) 306-5631, (703) 306-5632, (703) 306-5633**.

Jean Bolte Fleurantin

June 11, 2003

JBF/